

1995.74509

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re U.S. Patent Application	)
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Applicant: Brian Smith	)
	)
Serial No. 10/565,317	)
	)
Conf. No. 7637	)
	)
Filed: January 19, 2006	)
	)
For COMPOSITE BUILDING PANEL AND	)
METHOD OF MAKING COMPOSITE PANEL	)
	)
Art Unit: 3635	)
	)
Examiner: Eppes, Bryan	)

DECLARATION OF BRIAN SMITH UNDER 37 C.F.R. § 1.132

I, Brian Smith, 410 LaCosta Avenue, Encinitas California, 92024, declare as follows:

1. I graduated as a Chartered Accountant from the Institute of Chartered Accountants in Perth, Australia. From 1979 to 1980 I attended the University of California Los Angeles Graduate School of Management. In September 2003 I founded Ecolite Concrete Services, a DBA that would become Ecolite Concrete USA, a building systems technology company that licenses technologies for designing and fabricating wall systems for commercial, municipal, and government construction, typically on a large scale. I currently serve as Chairman of the Board and I direct Ecolite's Licensing Sales. My experience in the concrete wall systems industry spans about 13 years.

2. I am the named inventor of U.S. Patent Application No. 10/565,317 ("the '317 Application).

3. I understand that claims 1-8 and 29-31 of the '317 Application presently stand rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 4,649,682 to Barrett ("the '682 Patent") in view of U.S. Patent No. 6,708,459 to Bodnar ("the '459 Patent").

4. I understand that with the Amendment accompanying the submission of this Declaration, new claims 32-38 are presented. Independent claim 32 calls for the combination of a metal frame partially embedded in a concrete slab, the concrete slab having a density of 400 to 1760 kg/m<sup>3</sup> (25 to 110 pcf) and including entrained air that lowers the thermal conductivity of the slab and forms a thermal barrier between said metal frame members and the ambient exterior of the structure.

5. The claimed combination of this specific air entrained, lightweight concrete with an embedded metal frame solves thermal problems that are well known in the industry. Specifically, the lightweight, air entrained concrete forms a thermal barrier between said metal frame members and the ambient exterior of the structure, at least reducing and in most cases preventing moisture condensate on the interior metal frame members.

6. I have personal knowledge of most concrete exterior wall systems being produced and installed in the U.S. over the last 10-years. I am not aware of air entrained, lightweight concrete of the claimed density range being used in composite exterior wall building panels in combination with the claimed reinforcing layer and metal frame partially embedded in the concrete, prior to the present invention.

7. To my knowledge, the industry avoided embedding frame members into conventional concrete to form exterior wall panels due to the heat transfer that occurs between the interior and exterior of buildings through metal wall frame members, which commonly causes problematic moisture condensate on the interior portions the metal frame members. This in turn causes damaging moisture condensate on interior walls and partially saturated wall board.

8. The problem of heat transfer was conventionally solved by spacing the frame members a distance apart from the concrete panel with spacers or other devices.

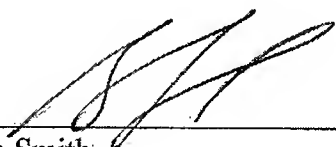
9. The problem of heat transfer was also conventionally solved as disclosed in the Bodner '459 Patent, where the metal frame is provided with holes at the junction of the embedded frame portion and the non-embedded frame portion to slow the heat transfer through the frame.

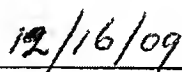
10. I discovered that metal frame members can be successfully embedded in air entrained, lightweight concrete to reduce heat transfer. Because air entrained lightweight concrete is a better insulator, the problems of heat transfer and moisture condensation are avoided. To my knowledge, the prior art did not recognize this.

11. My colleagues in the field of exterior concrete wall panels often ask me why I use air entrained lightweight concrete over conventional concrete, due to the higher cost of air entrained lightweight concrete. There is a lack of recognition by my colleagues in the field of exterior concrete wall panels that air entrained concrete can provide better insulation, reduce thermal transfer and avoid moisture condensation problems.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further

that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
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Brian Smith

  
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Date